FACULTY OF ELECTRICAL ENGINEERING

UNIVERSITI TEKNOLOGI MARA

PULAU PINANG

FINAL REPORT:

WATER LEVEL CONTROLLER USING PIC

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This report is submitted to the faculty of Electrical Engineering,

Universiti Teknologi MARA (UITM).

In partial fulfillment of the requirement for the award of Diploma in Electrical Engineering.

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Date: 6/10/2016

ABSTRACT

Water is the most important Nature's gift to the mankind, without water there is no life. Water level controller system in a multistoried residential building is very useful nowadays. An effort is made to design a circuit used in this system, which can control the storage level of water in a tank to provide water throughout the day without any wastage. Also, it will help in reducing the power consumption and prevent human personnel making it cost effective. This system is designed, implemented and analysed using Proteus software and Mplab software.

There are two reservoirs, in the roof top and underground. One pump is coupled with a motor. Depending upon the water level of both the tanks, the motor automatically will be in on or off state to maintain the water level of roof top tank minimum level to maximum level through constant monitoring. More specifically, we investigate the microcontroller based water level sensing.

It is a closed loop real time control system, where potentiometer is attached to the topmost of the tank to measure level as the long plate attached to it goes up or down according to level of water. Reading from potentiometer is then fed to microcontroller to provide a feedback level. As a certain rate of water is flown out of the tank, the microcontroller will maintain the level of water. A display of gain, as well as real-time level reading is on LCD display, with input parameter of gain are entered. Based on the result, the reading of system from potentiometer is quite reliable. Through the project, it can be concluded that the microcontroller PIC16F877A can drive water level and then control it when there is water flown out of the tank, as well as reading input parameter and displaying control parameter in real-time in LCD display.

ACKNOWLEDGEMENTS

In the name of Allah SWT, the most compassionate, the most merciful. I thank Him for always accompanied me throughout the project as well as my overall study in the university.

Firstly, I offer my sincerest gratitude to my supervisor, Ms. Anith Nuraini for guidance, knowledge, views and suggestions during the progress of the project.

Lastly, I sincerely express my deepest appreciation to my family who have supported me over the years. I would also like to give many thanks to my friends for their support during the completion of this project.

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